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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,922	01/25/2001	Takaya Iemura	P/3156-20	6154

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EXAMINER

LE, AMANDA T

ART UNIT	PAPER NUMBER
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2634

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DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,922

Applicant(s)

IEMURA, TAKAYA

Examiner

Amanda T Le

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/25/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3, 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 7, 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following limitations “a second multiplier” (claims 6, 7, line 3), “a second adder” (claims 6, 7), “a second low-pass filter” (claim 8), “a fourth multiplier” (claim 8) are unclear since “the first” multiplier, adder was not recited in the independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Wynn (6,009,317, submitted with IDS #5).

Admitted prior art (see Fig. 11 of the pending application) discloses almost all the claimed subject matters, except for “a quadrature controller” and “a quadrature error detection unit” for correcting a quadrature error between phases of an in-phase component and a quadrature component of said signal.

Wynn discloses a circuit (Fig. 3) which comprises the quadrature error detection unit (62) and the quadrature controller (79) for compensating quadrature imbalances between the inphase and quadrature signals (Abstract, col. 1-3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the prior art receiver, using Wynn's teachings, to incorporate the quadrature error compensation feature. Such modification would allow the correction of undesirable quadrature imbalances, thereby obtaining accurate inphase and quadrature demodulated signals, as suggested by Wynn.

5. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Masenten (6,535,560).

Admitted prior art (see Fig 11 of the pending application) discloses almost all the claimed subject matters, except for "a quadrature controller" having the claimed arrangement and "a quadrature error detection unit" for correcting a quadrature error between phases of an in-phase component and a quadrature component of said signal.

Masenten discloses an adaptive calibration system (Fig. 3) comprising of the quadrature controller having the claimed arrangement (138, 139, 146) and the quadrature error detection unit (154, Fig. 4) for compensating quadrature errors (col. 1, 2, col. 3, lines 42, col. 7, lines 10-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the prior art receiver, using Masenten's teachings, to incorporate the quadrature error compensation feature. Such modification would allow the correction of undesirable quadrature

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imbalances, thereby obtaining accurate inphase and quadrature demodulated signals, as suggested by Masenten.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 6,310,513. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matters recited in the pending claimed invention are disclosed by the patented claims.

Allowable Subject Matter

8. Claims 6, 7, 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph and/or the double patenting rejection set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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9. The following is a statement of reasons for the indication of allowable subject matter: Prior art of record, taken individually or collectively, fails to incorporate in the quadrature error compensation circuit a quadrature error detection unit or an automatic gain controller having the claimed arrangement.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Genrich and Le Polozec et al disclose different arrangements for quadrature error correction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda T Le whose telephone number is (703)305-4769.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (703)305-6714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AMANDA T. LE
PRIMARY EXAMINER